

RECEIVED

Page 1 of 7

JUN 21 2001

1638

TECH CENTER 1600/2900

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/645,593

DATE: 05/21/2001
TIME: 08:43:18

Input Set : A:\DES.txt
Output Set: N:\CRF3\05212001\I645593.raw

8 / K.T
6/26
Raw
Seq
Listng

P. S
ENTERED

10 <110> APPLICANT: Chaudhary, Sarita
12 van Rooijen, Gijs
14 Moloney, Maurice
16 Singh, Surinder
21 <120> TITLE OF INVENTION: Flax Seed Specific Promoters
26 <130> FILE REFERENCE: 9369-151
31 <140> CURRENT APPLICATION NUMBER: US 09/645,593
33 <141> CURRENT FILING DATE: 2000-08-25
38 <150> PRIOR APPLICATION NUMBER: US 60/151,044
40 <151> PRIOR FILING DATE: 1999-08-27
45 <150> PRIOR APPLICATION NUMBER: US 60/161,722
47 <151> PRIOR FILING DATE: 1999-10-27
52 <160> NUMBER OF SEQ ID NOS: 25
57 <170> SOFTWARE: PatentIn Ver. 2.0
62 <210> SEQ ID NO: 1
64 <211> LENGTH: 4305
66 <212> TYPE: DNA
68 <213> ORGANISM: Linum usitatissimum
72 <400> SEQUENCE: 1
74 ttcaaaaccc gattccccag gccccctat tgaagatatg ggggaagttc gacgagatcg 60
76 atgtcggtc gagtgtatg gtgtatgtc cggtttgggg gaggatgagc gagatagcca 120
78 agactagcat tccgttccca cacagatgtt ggaattttgtt ccaaattccaa cacttgcgt 180
80 attggagcga cgatagggac gccccaaaaac acatccgtt gatcaggggag ttgtacgtg 240
82 atctcgagcc ttatgtgtcg aagaatccga ggtatgttta cgtgaactac agggatctcg 300
84 acatcggtat gaatggagga ggtgaagggg atgagaaggg tactttaggt gaggctaagg 360
86 tggggggggaa gaagtacttt ggggtcaact ttgatcggtt ggttcgggtg aagacgattt 420
88 ttgatcccaa taatgtgtttt cggaaacgagc agacgttcc ctcatttcca actcggttat 480
90 aaggatcaat gatcaatgag aattttccctt tccaatgtga ttacaaggcc tattgggtca 540
92 gcttctcaa ctgtcttat tcattttagat taattcataa caactattaa tttaccagcc 600
94 ttttatccgg cccgttggcc gatttattttt cttaaatgtttt agatgaaatg aaaccgattt 660
96 agttttttttagt gagatgagat taatcttaat ttgcttggaa ttactcagc gttgatgtga 720
98 tatttggaat taactaaaat gataaaatatc ggataaaaat aaaaatattt aaaataaaataa 780
100 acataaaacat aagaacaataa aaataaaataa aatttattttt aatttttttc ttgtttttct 840
102 ttctgtatca tacatcttctt ctcttacttc ttaaaggctt ttcaatttactt acttaattaa 900
104 atacaataga taaatcgat atttataaactt attaacctat acacttgcac ggtgaacaat 960
106 caatatgata atataataat aatataataa ttcaatttattt aatctcaat ttttaattta 1020
108 taaatgtttt gccgttcagg tctgcaagctt ccggacttccctt ttttgcgtt agtttctgcg 1080
110 gtctcaaggat ataacgacttcc ggagcgcacgacgatccat tccaaatggac ggggttcattt 1140
112 tctggccgtcg ttgagctcgat ttggcgtgtc atgctggagttt cagatgttccctt aaaaaaaaaac 1200
114 cctaaaacttag agggtgattt gggtaaaat aggggtttgg cctgggttcc attgtccaaa 1260
116 gtttttagtca actttaaaaac agacttaat ttatgttccctt aaaaatgtttt atctgttattt 1320
118 atatttagctt gtaatttagtcc ttgacaatgg ggccggacgg gtacggattt gggaccccgaa 1380
120 tccccggccca tagtgtatgtt gctcaactgc caagtgcac ttggaccgaa attattggac 1440
122 acgaagttactt aatgtgaaaaa acttttacattt ttgttattttt tactttataa ctatgttattt 1500
124 ttcaaaaattt gaaactttat actatgtttt tatatgtttt agtataatctt aattttttatg 1560
126 caaatttcattt taattgttattt aaacttattttt cgtatccgtat ctaatttattt cgaaggcaag 1620
128 tcaaagtgtt attgtggactt atgtgagctt atattgaacc ttatctctc ccaaccactc 1680

RAW SEQUENCE LISTING DATE: 05/21/2001
PATENT APPLICATION: US/09/645,593 TIME: 08:43:18

Input Set : A:\DES.txt
Output Set: N:\CRF3\05212001\I645593.raw

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/645,593

DATE: 05/21/2001

TIME: 08:43:18

Input Set : A:\DES.txt

Output Set: N:\CRF3\05212001\I645593.raw

232 Met Asp Gln Thr His Gln Thr Tyr Ala Gly Thr Thr Gln Asn Pro Ser
 234 1 5 10 15
 238 Tyr Gly Gly Gly Gly Thr Met Tyr Gln Gln Gln Pro Arg Ser Tyr
 240 20 25 30
 244 Gln Ala Val Lys Ala Ala Thr Ala Ala Thr Ala Gly Gly Ser Leu Ile
 246 35 40 45
 250 Val Leu Ser Gly Leu Ile Leu Thr Ala Thr Val Ile Ser Leu Ile Ile
 252 50 55 60
 256 Ala Thr Pro Leu Leu Val Ile Phe Ser Pro Val Leu Val Pro Ala Leu
 258 65 70 75 80
 262 Ile Thr Val Gly Leu Leu Ile Thr Gly Phe Leu Ala Ser Gly Gly Phe
 264 85 90 95
 268 Gly Val Ala Ala Val Thr Val Leu Ser Trp Ile Tyr Arg
 270 100 105
 276 <210> SEQ ID NO: 3
 278 <211> LENGTH: 46
 280 <212> TYPE: PRT
 282 <213> ORGANISM: Linum usitatissimum
 286 <400> SEQUENCE: 3
 288 Tyr Val Thr Gly Gly His Pro Ala Gly Gly Asp Ser Leu Asp Gln Ala
 290 1 5 10 15
 294 Arg Ser Lys Leu Ala Gly Lys Ala Arg Glu Val Lys Asp Arg Ala Ser
 296 20 25 30
 300 Glu Phe Ala Gln Gln His Val Thr Gly Gly Gln Gln Thr Ser
 302 35 40 45
 308 <210> SEQ ID NO: 4
 310 <211> LENGTH: 3501
 312 <212> TYPE: DNA
 314 <213> ORGANISM: Linum usitatissimum
 318 <400> SEQUENCE: 4
 320 tctagacatt tgacataaac cgaattcaaa gaacacaaca ttgactaaca ccaaaaagaa 60
 322 atagagtagt gaaatttggg agattaaaaa atagaaaaca actgattctt agaaaagaaga 120
 324 gatgattagg tgcttcagt tcggctgtc agggaaatcga gatgttcaact tatttacatt 180
 326 gtcgattcat ctcccaatttgc tcctgggtcc tttactgtcc gacgctttt tgaatccca 240
 328 ttaattccca tcaagtcttc cttcagctgc gtagcactgc tagctccaac atggagcgtg 300
 330 gagtctactc gttcatgggg catcgc当地 ag gtttgccttc atgttctgct accagccago 360
 332 gcccacccgccc tcttgggttgcgttgcataatttgcggacaatttgcggtaagc ggcgc当地 420
 334 gtcgc当地 ttcaccatatttgcgtttaa aacgtatatac acgagtc当地 tctacatgtc 480
 336 ccatcaccacc acatataaaag caatagtttgcggacttttca atatttgc当地 cggcatttgc当地 540
 338 cgacttgc当地 tctcgataat ttaatctttt tttctcttca gctgatttgc当地 tgc当地 600
 340 cgggctcaga agcacatcaa agggatctcttccatcgtagt attttttgc当地 gtc当地 660
 342 acgaaggcacttgc当地 ctttaatgtc当地 cgagctacag gctccgc当地 gacccgc当地 720
 344 ggttagatcgat tgc当地 tgc当地 ccaaaaatca gtttgc当地 gcggaatcaa cactagagac 780
 346 tcaccctaat gcatctcatg tgc当地 tgc当地 agtttcat tttgc当地 aggggtc当地 840
 348 gtc当地 tgc当地 ccatgc当地 ctttgc当地 atagaatttgc当地 aatggaaagc gtttccacc 900
 350 cagatcaagc当地 atagctacccttgc当地 cggccaaatttccggc当地 atcttccacc 960
 352 acaacttaaa gatgc当地 gatc当地 gtaaggaacttccggc当地 acacatcgaa taatcttgc当地 1020
 354 tgaccgggttc当地 ctgttgc当地 agtccctcaa tttcctcaac ctgttcaatc当地 atc当地 1080
 356 gc当地 ttatccc cccatatgg actttcatag cggc当地 gagc当地 gagc当地 1140

RAW SEQUENCE LISTING DATE: 05/21/2001
PATENT APPLICATION: US/09/645,593 TIME: 08:43:18

Input Set : A:\DES.txt
Output Set: N:\CRF3\05212001\I645593.raw

358 aaggatgagc ggcggcagat tgccggctaa gaaacgagct tcctgccttg ctctatggag 1200
 360 gcagatttct gagttgatgg tgatggatt gtatgtggc cactttaat ttaagttgat 1260
 362 ttttagcac ttcatcaccg taattaaata aataatttcc agtattttat atttatttcc 1320
 364 ttacgttatac taattttttg aaagattaaa accttgatata aggcaagatc atgacacgtc 1380
 366 gaagttaaagt gaatgagact cctaacaagg taataacaaa gcagttcata aaccgaatga 1440
 368 ccttgatctt tactaagctt gagatcattt aacatataat taaatacgat aatgaaagat 1500
 370 aagaacttta atataaaaat cattcaaaac gagaaactgaa taacaaaac aaagcaaacg 1560
 372 gccaacaaaaa taatagacgg tggaggatg atgcagagcc atccaccctt tttcccaagt 1620
 374 ttccttactg cttaacttctc tatgcataatc acaagacgccc cttgaaactt gttatgtatg 1680
 376 cagagccctt actcgccagg tcaccgcacc acgtgttact ctatcacttc tcctccctt 1740
 378 ccttaaaga accaccacgc caccctcc tcacaaacac tcataaaaaaa accacctt 1800
 380 gcatttctcc caagttcaaa ttatgttaca gctaaggcaag aactcaacaa caatggcgg 1860
 382 tcgtacaaca cagccacacc aagtccagg tccacacccag caccactatc ccaccggcgg 1920
 384 ggcttcggc cgttatgaag gtggactcaa aggccgttca catcaccagc aagatcagg 1980
 386 cagcggccca tcagttcca aggtgttagc agtcatgacc ggcgtccccca tcggcgggac 2040
 388 cctcttgc ttggccgggtaa accttggc tggacatgatc atcgggttgg cgatcaccac 2100
 390 cccgattttt gtcatctgca gccccttgc agtccccggcc gctctgtca tcgggttgc 2160
 392 cgtgagcgcg tttctggctt cggggatggc cgggctgaca gggctgaccc cgctgtcg 2220
 394 gtttgcgagg tatctgcagc aggctggca gggagtttggc gtgggggtgc cggatagtt 2280
 396 cgagcaggcg aagaggcgca tgcaggatgc tgcaggatgtt atggggcaga agaccaagga 2340
 398 agttggcag gagatccaga ggaagtctca ggaatgtgaaa gcatcagaca aataaggta 2400
 400 taataagggg ttttgggttc gtgtgtaaac tggtaaaatg gaaattctgg gttttactgt 2460
 402 acttttgcattt gtagtggaaat gatgagttc ttgttcttctt ttgtcttttata atcataaaatg 2520
 404 aagaagcagc atttcatgtt ctgggttgaat attgtcaaga attcgcacaa aatttagct 2580
 406 aaccaggttca atcttacccgg ttagacgact tcccaacttca ggtccatccc 2640
 408 ggtataagag tctggacttc tgaaacccctt agaccccttga tttggaaaaaa agatgaaacc 2700
 410 tttagaataaa attacaacga tggcagattt tacaaaactg gagtcagat catgtaaatt 2760
 412 agcccaataac taagaacccgg cgatgacaaac aattactagg aatatggttt tgccgttgc 2820
 414 cggcggcttag cggtgatgtat tggagaatat cggggatccca gatgtgaga accgaatcat 2880
 416 cgacgaacat taccggcga ggagccctt tcaagcaact ttggaaactcc tatatggctg 2940
 418 ttccagcagg ccacccgttc aagaaagaaaa gaagccatgt cagaatctt tacgaatct 3000
 420 aactggatgc tgatatgtat ccggccagggt tgcggagttc ttacaggca ggtatctaa 3060
 422 agaagaaaaca tggttgtat tggcattgtt gatgttccaa gcaacgcacg atctatctcc 3120
 424 ggatcctaaac aacaaaaata cggattctgt aagaaacaag cgcagaaaaac ttctgcaacg 3180
 426 aaaccactcg tatatttgg tctgagttgg agaaagatga ccataactact gtattinggtt 3240
 428 gaacttggat tggaaaccggaa attttggat gaaaagcgatg tgatctgtata taaaatttcg 3300
 430 atttagatggatggatccat tgagagaagg tagagttacc tgatactaca tactgcccatt 3360
 432 caggggtaaa agttgcctcg atgggtgtt gttggagatgg ttccaggctaaatccacaac 3420
 434 gctgaacaaa taaaagatg aatggatcaa tcttcaaccc ttacttctgc atttatgagg 3480
 436 atggctcaaggctcttag a 3501
 440 <210> SEQ ID NO: 5
 442 <211> LENGTH: 180
 444 <212> TYPE: PRT
 446 <213> ORGANISM: Linum usitatissimum
 450 <400> SEQUENCE: 5
 452 Met Ala Asp Arg Thr Thr Gln Pro His Gln Val Gln Val His Thr Gln
 454 1 5 10 15
 458 His His Tyr Pro Thr Gly Gly Ala Phe Gly Arg Tyr Glu Gly Gly Leu
 460 20 25 30

RAW SEQUENCE LISTING DATE: 05/21/2001
PATENT APPLICATION: US/09/645,593 TIME: 08:43:18

Input Set : A:\DES.txt
Output Set: N:\CRF3\05212001\I645593.raw

464 Lys Gly Gly Pro His His Gln Gln Gly Ser Gly Ser Gly Pro Ser Ala
 466 35 40 45
 470 Ser Lys Val Leu Ala Val Met Thr Ala Leu Pro Ile Gly Gly Thr Leu
 472 50 55 60
 476 Leu Ala Leu Ala Gly Ile Thr Leu Ala Gly Thr Met Ile Gly Leu Ala
 478 65 70 75 80
 482 Ile Thr Thr Pro Ile Phe Val Ile Cys Ser Pro Val Leu Val Pro Ala
 484 85 90 95
 488 Ala Leu Leu Ile Gly Phe Ala Val Ser Ala Phe Leu Ala Ser Gly Met
 490 100 105 110
 494 Ala Gly Leu Thr Gly Leu Thr Ser Leu Ser Trp Phe Ala Arg Tyr Leu
 496 115 120 125
 500 Gln Gln Ala Gly Gln Gly Val Gly Val Gly Val Pro Asp Ser Phe Glu
 502 130 135 140
 506 Gln Ala Lys Arg Arg Met Gln Asp Ala Ala Gly Tyr Met Gly Gln Lys
 508 145 150 155 160
 512 Thr Lys Glu Val Gly Gln Glu Ile Gln Arg Lys Ser Gln Asp Val Lys
 514 165 170 175
 518 Ala Ser Asp Lys
 520 180
 526 <210> SEQ ID NO: 6
 528 <211> LENGTH: 1676
 530 <212> TYPE: DNA
 532 <213> ORGANISM: Linum usitatissimum
 536 <400> SEQUENCE: 6
 538 tccactatgt aggtcatatc catcattta attttggc accattcaat tccatcttgc 60
 540 ctttagggat gtgaatatga acggccaagg taagagaata aaaataatcc aaattaaagc 120
 542 aagagaggcc aagtaagata atccaaatgt acacttgtca tcgcccggaaat tagaaaata 180
 544 cggccatat tggattccca cacattatta aaataccgta tatgtatttgg ctgcatttgc 240
 546 atgaataata ctacgtgtaa gccccaaaga acccacgtgt agcccatgca aagttaacac 300
 548 tcacgacccc attccctcagt ctccactata taaacccacc atccccaaatc ttaccaaacc 360
 550 caccacacga ctcacaactc gactctcaca cttttaaagaa ccaatcacca ccaaaaaatg 420
 552 gcaaagctga tgaggcttagc agccgttagca accgagttcc tcttcctgtat cgtgggtggac 480
 554 gcatccgtcc gaaccacagt gattatcgac gaggagacca accaaggccg cgggtggaggc 540
 556 aagggtggcag ggacagcgc agtctgcgc cagcagatcc agcagcggaga ctttctgagg 600
 558 agctgccagc agttcatgtg ggagaaagtc cagagggccg gccacagcca ctattacaac 660
 560 caggccgtg gaggaggcga acagagccag tacttcgaac agtgtttgt gaccaccta 720
 562 agcaatttgcg caccgcgggtg caccatgcca ggggacttga agcgtccat cggccaaatg 780
 564 aggccggaaa tccagcagca gggacacgc cagggacagc agcaggaatg tcagagggtgg 840
 566 atccagcaag cttaaacaaat cgtcaaggac cttcccccggac agtgcgcac ccagccttgc 900
 568 caatggccagt tccaggccca gcacatct gcatggttt gaagggttgc tgcattatga 960
 570 gatcgttacaa agacatgtc aggtgtttaag gatggataat aataataata atgagatgaa 1020
 572 tggttttaa gtttagtgtaa cagctgttaat aaagagagag agagagagag agagagagag 1080
 574 agagagagag agagagagag agaggctgtat gaaatgttat gatgtttct tgggtttttaa 1140
 576 aataaaatgaa agcacatgtc cgtgtggttc tatcgaattt ttcggccgggtt cctgtggggaa 1200
 578 aaagtccaga agggccggccg cagctactac tacaaccaag gccgtggagg agggcaacag 1260
 580 agccagcact tcgatagctg ctgcgtatgtat ctaagcaat tgaggagcga gtgcacatgc 1320
 582 agggggactgg agcgtgcaat cggccagatg aggcaggaca tccagcagca gggacagcgc 1380
 584 caqqaqgttq agqgttqtc ccatcaatct aacaagtcg ctaqqqact tccqqqacq 1440

Please Note:

Use of n and/or Xaa have been detected in the Sequence Listing. Please review the Sequence Listing to ensure that a corresponding explanation is presented in the <220> to <223> fields of each sequence which presents at least one n or Xaa.

VERIFICATION SUMMARY
PATENT APPLICATION: US/09/645,593

DATE: 05/21/2001
TIME: 08:43:19

Input Set : A:\DES.txt
Output Set: N:\CRF3\05212001\I645593.raw

L:1679 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1681 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1683 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1685 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1687 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1689 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1691 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1693 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1695 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1697 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1699 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:8
L:1793 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:10